

D. K. King
REMARKS

ON

THE COMPARATIVE SIZE

OF THE

HAND OF THE ACCOUCHEUR

AND OF THE

FEMALE PELVIS.


By GEORGE KING, Esq.,

SURGEON ACCOUCHEUR TO THE DORCAS AND EAST WALCOT LYING-IN
CHARITIES, BATH.

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ON THE COMPARATIVE SIZE OF THE HAND OF THE
ACCOUCHEUR AND OF THE FEMALE PELVIS.

BY GEORGE KING, Esq.

Surgeon-Accoucheur to the Dorcas Society, Bath.

To the Editor of 'The Institute.'

SIR,—You will see that this paper was published in a recent number of the *Provincial Medical and Surgical Journal*, but as that journal is only circulated among the members of that association, and as the subject is one upon which very little has been written, I am anxious that it should have a wider circulation. The 'INSTITUTE' professes to be the organ of the General Practitioners, and to that class I belong, and as I believe the subject of this paper more particularly concerns us, I have sent it to you, with some additions, for republication, in order that it may be seen by the general body of practitioners in midwifery; and I hope you will not think that such an article would be out of place in a publication that professes to be their adjudicator and protector.

Yours, &c.,

GEO. KING.

Bath, February 25, 1851.

THE following observations on the *size* of the hand and arm in the practice of midwifery, and the size of the female pelvis and capacity of the outlet, may to some of your readers appear rather singular, and many others may feel and think as I do, that it is also singular, when we consider and observe the vast difference in the size and development of this important and useful member of the human frame, in those men we meet with who are daily engaged in practising in that delicate and peculiar branch of our profession. It is extraordinary that it has never attracted their attention, or been noticed by the various teachers and professors of the obstetric science, or the general practitioners of midwifery; and it seems also to be unobserved by all authors on obstetric practice, for we have published lectures and instructions, as well as manuals, for the assistance and guidance of the young beginner in the practice of midwifery,

but in none of them have I been able to discover the slightest notice or reference to the size of the hand and arm, which is, and should be so considered, a matter of primary consideration, and ought to be noticed by them. They all give a most minute description of the various deformities of, as well as the diameter of, the outlet of the female pelvis, through which the hand is to be passed, and pages are written on the size and the choice of a catheter, or an œsophagus or rectum bougie, which is to be used for dilating those natural passages; but of the only instrument that can safely be used for the purpose of dilating the vagina, in order to get at the contents of the uterus, nothing is said. From the universal silence, we may be naturally led to think or suppose that all men's hands and arms are invariably of the same shape and size, and that, therefore, any allusion to it was useless and unnecessary in any catechisms or instructions that may be published or given to a tyro on his entering into this peculiar branch of the profession. Although midwifery is considered by the *pure* surgeon to be beneath his notice, and by others as a practice detached from physic and surgery, yet it partakes of both; and those who have made the medical profession their choice, and wish to rise in it, will find they must practice midwifery, and there is no part of our profession so likely to bring them before the public and into notice, as this. However degrading or derogatory it may appear to the pure surgeon to be thus engaged, the obstetric practitioner will find that in this department of his profession, not only his knowledge of the most intricate parts of anatomy and physiology will be required, but all his skill and energies, as well as moral courage, will be brought into action, in the performance of the most distressing and perhaps the most bold and difficult operations of surgery, and the most perplexing and frightful cases of the practice of medicine, and in those surgical operations the size of the hand will be of the greatest importance; yet it is unnoticed, and no one would for a moment imagine that there was any difference or variation in the structure and size of human beings, and that all men must naturally be of one uniform form and size, and that there was, or is, no such thing among the human race as giants or dwarfs, and large, bony, muscular men, as well as small, thin, and slender skeleton-like men. These proportions and differences in the form of the human frame are altogether passed over or forgotten by all writers and teachers of the obstetric practice. There are also persons practicing medicine, and surgery, and midwifery, with monstrous large hands and arms, (as large as a sign-post,) while others have small delicate hands, with very thin and slender arms. There cannot be a doubt as to which of these would be the fittest and ought to be selected for the practice of operative midwifery, and I consider that the

former of these ought never to study, or if they did, not to make this branch of our profession their peculiar practice, being well assured that in very difficult or preternatural labours, when the introduction of the hand into the vagina is required for the purpose of altering the position of the fœtus in utero, or for preternatural labour, they are physically incapacitated to render that assistance under such circumstances, with that dexterity and ease that the case demanded, and the patient had a right to expect; and I fear they would add greatly to the sufferings, if not endanger the patient's life, while the latter would be able to render great assistance, and effect much good, as well as to be the means of mitigating a vast amount of suffering. This being my conviction, I am induced to draw the attention of the general body of General Practitioners, and the readers of the 'INSTITUTE' to the subject, and will endeavour to show them that it is of vital importance, in a practical point of view, that a man-midwife should have a small hand. And I have no hesitation in stating, that those gentlemen who have such monstrous upper extremities as I have described, ought never to think of practising as accoucheurs, as they will be sure to fail in their attempts to relieve their patients in some of the most distressing preternatural presentations, and while they are waiting for assistance or a smaller instrument, the chances are that they will lose their patient. In order to illustrate the subject, and to prove the very great difference in the size and the measurement of the hands of some, I need only to draw the attention of the reader to a daily and familiar occurrence, which may be seen at any glove shop. In trying on gloves, what pulling and tugging, what stretching, there will be, and frequently laceration, in the many forcible and ineffectual attempts that are made in endeavouring to get a large hand into a small glove. I understand from the glovers that they keep what they call large sized men's and small men's; the largest measures *eleven inches*, and the smallest *eight inches* across the knuckles. What an awful disparity and difference in the size of an instrument, which is to be used indiscriminately, and without deviation or the least caution—as a dilator, and which is to be painfully forced through those structures lining and partly forming the outlet of the parturient passage in those frightful, sudden, and urgent cases of flooding, &c., when there is no time for reflection, consideration, or substitution, for on its prompt and immediate application often depends the life of both mother and child. In all cases of protracted presentation, when it may be considered advisable or necessary to alter the position of the child in the uterus, the hand is the only instrument applicable or that can possibly be used for the purpose; yet we have no direction for the

application of it, nor have the obstetric professors thought it of sufficient importance to inform their pupils whether a large one or a small one would be the best for use; nor is there any notice of the enormous difference in the size of them. Dr. David Davis, in his valuable work 'On the Principles and Practice of Obstetric Medicine,' says:—"It is well known that the hand, when properly adapted to its object, is a much safer obstetrical instrument than any instrument that can be made." We all know that it is the indicator or eye of the practitioner in midwifery, and possesses a power far above all other instruments—that is, the property of touch; by this sensibility circumstances are made known, and the situation of the parts we are in contact with is conveyed to our minds, and by this all our movements and operations are directed, and our medical treatment regulated. Sir Charles Bell, in his 'Bridgewater Treatise,' gives the following description of the human hand:—"The human hand is so beautifully formed, it has so fine a sensibility, that sensibility governs its motions; so correctly every effort of the will is answered, so instantly, as if the hand itself were the seat of that will. Its actions are so powerful, so free, and yet so delicate, that it seems to possess a quality—instant—in itself; and there is no thought of its complexity as an instrument, or of the relations which make it subservient to the mind." This is a vivid and beautiful description of a perfect human hand, fully and properly adapted for all natural purposes as well as art. But all men's hands are not alike: they are not so beautiful, or so delicate, nor are they all so symmetrical as the one depicted by Sir Charles. They, therefore, are not all so well fitted for all the purposes for which they may be required to be used, and it is because I believe that an enormously large hand is a highly improper instrument to be used in many of the difficult and perplexing cases of midwifery, that I have been induced to make these remarks on the comparative size of the hand, with a view of drawing the attention of obstetric teachers and practitioners to it.

In all surgical operations we have the most minute directions given us as to the instruments to be made use of, as to shape and size, &c., and in all surgical works a description is given of them, and ample rules laid down for the selection of the most proper to be used, and their exact width, as well as length is particularly mentioned, and we have also the exact dimensions of the pelvic aperture, and we have also ample directions as to what sized foetal head will be likely to pass through it without assistance; but the outlet of the pelvis may be considerably diminished by distortion, and the inlet contracted, nevertheless, regardless of the size or consequences, the hand must be got through in order to find out what is going on at the brim; and it

may also be necessary to put the hand up into the uterus, but whether a large hand or a small one will be best fitted for the operations in this diminished space we are not told. There may be, and we do often meet with a very contracted vagina, and this is to be overcome by sheer force, for there are no muscular fibres in this part to assist distension; the first application of the hand in the practice of midwifery is in the examination *per vaginam*, or as it is called by the old women, taking or trying a pain. This is done by introducing the forefinger slowly, and if we press with some degree of firmness on one side of the vagina, there will be less pain; if it is done more timidly it produces a tingling or irritation, which we should try to avoid. But this one finger exploring does not always reveal to us all that is going on, and often at this early stage of the labour, we may be obliged to pass up the whole hand, as the part presenting may still be above the brim of the pelvis. In such a case, the idea of an accoucheur with a tremendous hand and arm, to be in attendance on a delicate young girl, about 16 or 18, with contraction of the vagina, and with a flooding or preternatural presentation, is frightful, and the very thought of it to a person who has seen or had much experience in these difficult and monstrous cases, must make him shudder. The giving birth to a child being a natural process, it is not often that we have to interfere at all till the child is born; but being engaged and in attendance we ought, in every respect, to be fully qualified to act in all cases of malformation or complex labour. We all well know what a fuss there is made when a lady is likely to require the assistance of an accoucheur, as to who she shall have, and there are lots of consultations and inquiries among old aunts and consins, old dames and washerwomen, and they all take into consideration the age, appearance, character, dress, habits, mannerism, family, &c., &c., and all they know and believe, but very little is thought of their skill and ability. It has often surprised me that these expecting ladies should never think of the size of the hand. It is a proof that they can have but little idea of what the accoucheur may have to do with them, and it is also singular that the old advisers should not think of it, as they must have known a little of the application of it themselves. I believe in cases of contraction of the vagina, when labour has been impeded in consequence of a cicatrix or any other cause, it has been recommended, and it may be sometimes necessary as well as proper, to divide it by a knife, in order to allow the child's head to pass, but I have never heard it recommended to reduce or shave a little of a man's hand or arm off, in order that it might with more ease pass; but if any obstetric practitioner, with a very large hand, and a great monster arm, in cases of contracted vagina or deformity of the pelvis, was rash enough to attempt

to turn a child in utero, or detach an adherent placenta, he would in my opinion be a very fit subject for such an operation. We do not always find uniformity in the parturient passages of females; there is a vast difference in the capacity of the vagina and dimensions of the pelvis as well as in the size of the hand and arm. In some women we find the vagina large, loose, and flabby, and the outlet of the pelvis very large; such women will generally have very quick and easy labours, and we can be hardly ever in time to be present at the birth of the child. The place and the situation we occasionally find these patients in, would, if we did not know they were prudent and married women, lead us to suspect that they had some idea of concealment or evil intent. I have always thought that those unfortunate females who commit infanticide, or had been guilty of concealing the birth of their child, must belong to this class of women, having a large and well-formed pelvis, and a lax and capacious vagina, and consequently must have very easy and quick labours. With the first child it is not easy for a woman to distinguish actual labour-pains, with the pressing or bearing down of the child, from an inclination to have a motion; and the attack may be sudden and rapid, without intermission, till the child drops from them without the possibility of their having the power of controlling or stopping its exit, or of being collected enough to give an alarm until it was all over, the child being born, and they having got rid, as they suppose so nicely, of what had for so many months caused them so much trouble and anxiety, and so suddenly and unexpectedly, which was contrary to all their anticipations, that they could think of nothing during the long period of gestation but the pain and difficulties connected with labour. After recovering the shock and surprise produced by the birth of the child, which had annihilated from the mind all recollections of the past, and rendered them incapable of thinking of the future, they would only think of the present, and in a moment of the greatest excitement and fright, finding themselves alone and thus far undisturbed, and the child quite prostrated, in a state of asphyxia from the fall or want of proper attention, they for the first time think of the unnatural crime of the destruction or concealment of the child, with minds in a state of the greatest agitation and excitement, and vacillating between shame, hope, and fear, and in this confused and frenzied condition, they are led to commit a most frightful and inhuman act, which had by them never been contemplated, and the very thought of such a deed half an hour before, in their calm moments, would have been the most revolting and horrifying to their feelings.

And I am disposed to believe that the size of the pelvis, and the capacity and structure of the parturient passages, are circumstances, considering the intimate connection, and action and re-

action of the body and immaterial principles on each other, that have had much more to do with these tragical scenes than the organ of destructiveness, or concealment. In most cases of infanticide, all our attention is directed to the child in order to discover if there are any marks of violence, or any disorganization or injuries to account for its death. But the mother is considered a murderer and almost inhuman, and, shunned by her relations, is left only to the nurse, and often a policeman in the room or in attendance; little is thought of her condition or of any derangement or malformation of the pelvis through which the child has passed, or the altered condition of the parts engaged in the act of parturition. Women with a small pelvis, and a rigid, contracted vagina, and perhaps a large child, must naturally be a long while in labour, which will allow time for the disquieted mind to compose itself, and an opportunity for reflection on their condition and the consequences connected with it; and I have no doubt that then the moral and finer feelings will overcome the brutal. These poor creatures, long before their trouble, must have been told that the pangs of childbirth were awful and terrible to bear, and also have learnt, or had been given to understand, that the process of labour must be long, as well as painful and difficult; they, therefore, could not ever expect or have the least idea that they should be able to give birth to a child without its being known, and charity would lead us to hope that no female would premeditate the death of her own offspring. I have long determined never to give such evidence, in any case of prosecution, as would be likely to convict a woman of infanticide, unless it was very clearly proved to me that it had been premeditated, and that *no* preparations had been made for it before the birth of the child!

I believe there is no rule of law that can prevent or restrain a professional man, when in the witness-box on such momentous occasions, from taking into his consideration probabilities as well as facts, of which *he* is, professionally, best able to judge. But the indecision of medical witnesses is so generally known by juries, that verdicts are frequently returned in direct opposition to their testimony.

There is a case related in the *Lancet* some years back, of a medical man being requested by a magistrate to examine a young woman who had been suspected of giving birth to a child. She was examined by him six days after the child had been born. His evidence was, "That he found her vagina rather relaxed, so as readily to admit the whole hand," and this evidence was brought forward and intended to convict the woman instead of, as I think, acquitting her. The vagina, if not immediately, very shortly after delivery contracts to its natural state and calibre, and if six days after the giving birth to a child there was room to ad-

mit the whole hand, there must have been the usual capacity of the vagina, and no proof of recent delivery. This is a point of very great importance to those who may be called to give evidence in proof of recent delivery, and deserves their most serious consideration. Writers on Forensic Medicine tell us, that the external parts of generation exhibit signs of recent delivery for days after, and even in some instances a week. After a woman has given birth to a child, we may find the vagina relaxed and easily dilated, and its internal surface smooth from the obliteration of the rugæ, and that the labia would be also tumefied and inflamed; but all this could only occur after a long and very tedious labour, where the child's head had been a long while in the passage pressing on the perinæum. In sudden and rapid labours the child is, by the powerful action of the uterus, and in consequence of the capacity of the pelvis, and absence of the usual constricting powers of the outlet, shot through the vagina with that rapidity and almost painless velocity that, I believe, scarcely any inconvenience or disorganisation can be or is produced in the child's passage into the world, and that on examination of the vagina even *two* hours after delivery, we should find the rugæ, and the parts engaged in expelling the child, in their natural state; and there would be much difficulty in such cases in proving that a woman had recently given birth to a child, by the appearance of the external organs of generation.

The following cases will tend to illustrate the latter part of this subject, and will show, as well as prove, how quickly and suddenly some women will give birth to a child. Those who have been much engaged in obstetric practice, must have been called to many sudden and rapid labours, and have, no doubt, witnessed some curious and frightful scenes, and have been, like myself, surprised and astonished with what rapidity the parts which are engaged in expelling the child yield and dilate. As facts are generally valued above hypotheses, I will just name two or three out of the several cases of easy parturition that have occurred in my own practice. In order that they may be understood I must also relate some of the circumstances connected with them.

Some years since, a young man called on me to know at what hour in the evening a female friend of his could see me. I fixed the time, and, at the appointed hour, a very respectable-looking young woman, about 20, called on me. She was living in a family as lady's maid. She introduced herself by saying that she believed a friend of hers had called on me, and knowing the object of her visit, I put such questions to her as I then considered necessary, in order to ascertain the situation she was in. She did not seem to be very well versed in such matters, and I had some difficulty in getting out of her what I wished to know;

from what I did elicit, I thought her to be about eight months gone in the family way, and this I told her, which appeared to surprise her much, and she became much affected, sobbed out she had hoped it was not so, and left my surgery very much depressed, without telling me where she lived or who her friend was. Early on the following morning her young man called on me to say that I was quite right, his friend was in the family way, and that she had had a child in the night, and he came to know what they were to do with it, as it was dead, without entering into any particulars as to what had happened in the night. I gave him directions as to how still-born children were usually buried. He was also to tell me that the young woman would call on me in the evening, which she did, and from her I got the following account out of her about her labour, which, from her manner and natural simplicity, I believe was the truth:—After she left me the preceding evening she went to bed at the usual time, had no pain except of mind from what I had told her; her bedfellow was the housemaid, and she slept with her that night. She thinks she had slept about three hours, when she awoke up with great pain in the lower part of her bowels, with an urgent desire to make water; she got out to the po and could not get off again till the child was born; she thought that she was on it about ten minutes. I asked her if the child cried; she replied no, but it had a good deal of hair on its head. Not being a coroner or a judge I did not consider that I had a right to ask any more questions. I gave her an anodyne mixture, and advised her to take very great care of herself. She had that day waited on her mistress at dinner; she did very well, and got through it without being detected, in a house where there were several other female servants. Her milk was very troublesome for some weeks. She had been seen almost daily by her lady's medical man, and he had frequently prescribed for her, without discovering what was the matter with her. The most astounding part of this affair is, that the birth of a child should have taken place by the side of the bed without rousing her fellow servant, no means having been used to prevent her knowing what was going on; mesmerism and chloroform were not so much in vogue then as they are in the present day. This woman is now married, and I have attended her with six children since, and out of the six I was only in time to be at the birth of one, although I was always sent for directly she was taken in labour, the distance not being far, and the messenger generally found me at home. With the first after her marriage she was taken in the kitchen, and had but one pain, and the child was born before she could be got up stairs.

The second case, a young girl about 18, called on me late on a

Saturday evening, to tell me that she thought that she was taken unwell. I had not seen her before for several months. She had then consulted me on the subject of the suspension of the menses. While talking to me she complained of a sharp pain at the lower part of her stomach, with rather a queer look, which plainly portrayed what was going on; and although I am not a physiognomist, I think I have practice enough in midwifery to understand the physiognomical signs of the face during labour-pains, so as not to be mistaken; I therefore gave her to understand that she was in labour, and soon packed her off home, as I clearly saw that there was a chance of my having an increase in my family, and a possibility of both doctor and patient being suspected of having contemplated the concealment of the birth of a child, not having made any preparation for such an event. About an hour after she left my house, I was sent for in great haste. Her young man let me in, and then set off for a friend. I found her alone, sitting up in bed, hushing a baby, which she had laid across her abdomen; it was crying lustily, with the placenta still in the vagina, and the umbilical cord not divided. I separated the child, and removed the placenta. While I was dividing the umbilical cord, she said, "I didn't have much pain when the child came into the world." I remained with her till a neighbour came in. This young woman was living with her uncle; the poor old man could think of nothing but the cholera, and was below puffing away with the bellows to get some water hot. The old man's auditory nerve was not so sensitive as it had been fifty years before, therefore he did not hear the crying of the little brat. It was removed in the morning, and he knew nothing of what had taken place in the night. The girl did very well, and got married directly she was able to go out. The first child after the marriage also came into the world in a hurry. I was not in time. With the third, she had been out for a walk, and on her return went up stairs to the po, and the child popped into it; the po being half full of water, the child was suffocated. Although there were two or three females in the room with her, they were too terrified to lift her off and remove the child, but kept her in that situation till I came to her assistance.

The third case. One night last winter I was called, unexpectedly, to a married woman in an adjoining street, who had had two or three children. I found her sitting on the edge of the bed, very faint, and a child and the placenta attached, lying on the floor, and a large pool of blood across the room. The women who came in to her assistance were so aghast at the sight, that they became powerless, and could do nothing, as they said, till the doctor came. I did what was necessary. The account this woman gave me was, that she was aroused up from her first nap with a pain and an inclination to make water, and she was stoop-

ing down to get at the po, when the waters broke, and the child and the after-birth came away together, with one slight pain. Her husband was in bed ; he immediately got up and ran for me, and left his wife by herself.

Such instances as these are numerous, and they most clearly show that women who have such quick and easy labours must have a large and well-formed pelvis, and the vagina and external parts must also be very relaxed, and easily dilated, which is a most satisfactory and convincing proof that during the act of parturition such women can have but little or no contracting power over the outlet, and this is, I believe, the cause of so many children suddenly passing through life into a faecal repository, where they may be axphyxiated and die. Whether this axphyxia is the result of the rapid labour, or caused by the foul air of the receptacle, is not easy to determine ; but death is not necessarily the consequence. If assistance was athand, the child might be resuscitated ; therefore, the cause of death is the absence of this assistance, and is, I think, called in Medical Jurisprudence, "Infanticide by omission." I fear that many a poor creature, to our shame, has suffered the extreme penalty of the law, or is now pining in a dungeon for this unintentional negligence, which, at the time, she must have been unconscious of.

There was a remarkable instance of easy delivery published a few years since by a French physician, that occurred at Arras, in France. A woman, 22 years of age, in the last month of her pregnancy, was suddenly affected in the night with acute pains in the abdomen, and considering it was what is called a bowel complaint, she immediately proceeded to the *garde-robe*. She had scarcely taken her seat, when the child was expelled *without any pain*, and she declared *she was totally unaware of what had happened till she heard the child cry*. This is the only case that I have met with recorded of a woman having a child *without pain*. Children that come into the world so rapidly do not generally cry.

There is a case in a late number of the *Provincial Medical and Surgical Journal*, related by John Gregson Harrison, Esq., M.D., of Manchester: he states that he was engaged to attend a lady, aged 34, in her first labour, and "was hastily summoned to her house early in the morning; but on arriving there I was informed that the child was born a few minutes previously to the messenger leaving her, and that the infant was dead. On making inquiries I found that my patient, thinking she had a desire to use the night chair, attempted to make use of it, and then voided what she supposed to be the liquor amnii, and sat there some time afterwards, feeling much indisposed; but, on getting into bed, she saw, to her great astonishment, the child lying in

the vessel quite dead. She declared most positively that she had experienced no pain, and was quite unconscious of the exact state of her position. I weighed the child and found it to be six pounds and three quarters, and full grown. The mother had completed her full time of reckoning."

I have related these cases of sudden delivery with the humane view of showing, that at least some of the instances of children having been deposited in privies might have been accidental, and the parturition being nearly free from pain, the female might not have been aware of what had happened. I believe that many a poor girl has been overtaken with labour unexpectedly, and from not having been prepared for such an event, and the child dead, she is at once suspected of infanticide, and dragged into a criminal court of law, and arraigned before a jury for an act of supposed crime, over which she had not the least command, or power of controlling.

Although this is a subject that belongs to the obstetric department only, it may sometimes become a medico-legal question, and is, I think well worth the notice of professors of medical jurisprudence, for in some cases of infanticide and concealment of the birth of a child, it may be very properly adduced as mitigating evidence, and directing the medical men's evidence more to the state of the mother.

Should you concur with me that this, as well as the size of the hand and arm, in the practice of midwifery, are subjects that have been neglected or overlooked by teachers and obstetric practitioners, you will perhaps allow their attention to be directed to it by the insertion of my remarks in an early number of the 'INSTITUTE.'

Bath, February 25, 1851.

THE END.

